Brady Philhower

bphilhow@purdue.edu brady-philhower-portfolio.pages.dev/ linkedin.com/in/b-philhower/

EDUCATION

Purdue University - West Lafayette, IN

Bachelor of Science in Computer Engineering *Fall 2023 - Summer 2026*

- Concentrations: Computer Systems | Microelectronics and Semiconductors
- Dean's List and Semester Honors *Fall 2023 - Present*
- GPA: 3.82 / 4.00

Master of Science in Electrical and Computer Engineering *Fall 2025 - Spring 2027*

PROJECTS

Neural Network Neuron AHB SoC Module *Spring 2025*

- Designed, programmed, and tested the SystemVerilog design, which consisted of the following modules: AHB subordinate, data buffers, controller, systolic array, bias adder, and activation.

Microcontroller Tetris *Spring 2025*

- Created a Tetris game utilizing an STM32 microcontroller, an LED matrix display, a TFT LCD display, a 2-axis thumb joystick, and an EEPROM device. Bit-banging, SPI, interrupts, and I2C were utilized to interface with the different devices.

EXPERIENCE

Purdue SoCet Team Member *Summer 2024 - Present*

- Worked on the PCB Chiplet subteam to design an external SRAM connector board that connected AFTx07, a multicore SoC, to an FPGA configured as external SRAM.
- Worked on the PCB Chiplet subteam to design a dummy chiplet optimized for infinite tileability, simple trace routing, and minimized crosstalk.

Electrical Engineering Fundamentals I UTA *Summer 2024 - Summer 2025*

- Provided guidance and support to students during weekly tutoring and office hours, as well as provided positive, constructive feedback to students in a timely manner while grading assignments.

Microprocessor Systems and Interfacing UTA *Summer 2025*

- Tested in development labs utilizing a new development board and provided feedback to the lab coordinator about possible improvements.

CERTIFICATIONS

Semiconductor Fabrication 101 *Summer 2024*

- A program by Purdue University, Intel, and the University of Texas focusing on industry-standard semiconductor fabrication processes.

Altium Education PCB Basic Design Course *Summer 2024*

- A program designed to teach the basics of PCB electronic design, including routing and signal

TECHNICAL SKILLS

Programming Languages: SystemVerilog, C, Python, RISC-V Assembly, MATLAB
Software Tools: QuestaSim, VS Code, Git, Altium, KiCad, LTspice, Multisim, Autodesk Inventor
Knowledge Base: Computer Architecture, Embedded Systems, SoC Design, ASIC Design, Digital Design